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(71) Applicant: **LUCENT TECHNOLOGIES INC.**
Murray Hill, New Jersey 07974-0636 (US)

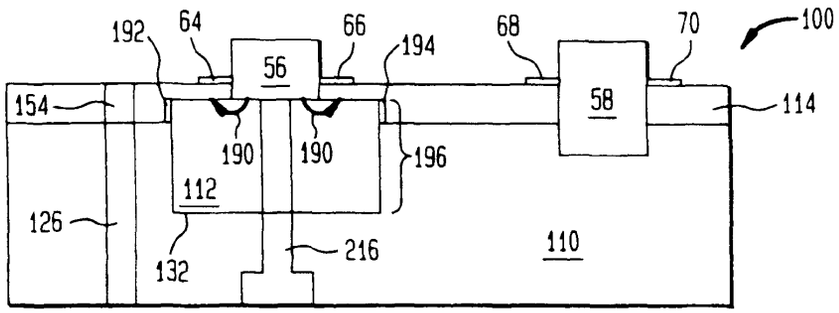
(72) Inventors:
- **Johnson, Michael Gunnar**
  Sparta, New Jersey 07871 (US)
- **Sosnowski, Janusz B.**
  Rockaway, New Jersey 07866 (US)

(74) Representative:
Johnston, Kenneth Graham et al
Lucent Technologies (UK) Ltd,
5 Mornington Road
Woodford Green Essex, IG8 OTU (GB)

(54) Assembly having a back plate with inserts

(57) An assembly (100) that has an insert (112) that fits onto a back plate (114). The back plate (110) receives a circuit board (114) that covers at least a portion of the insert (112). A components attaches to the circuit board and to the insert. The insert (112) is made out of a material having a thermal expansion coefficient that is close to the thermal expansion coefficient of the bottom surface (60) of the component (56), which allows the component (56) to be securely soldered to the insert (112) and therefore to the assembly. Preferably the insert (112) is also made out of a good conductor to provide a good electrical conduction path between the component (56) and the ground plane of the circuit board (114) that contact the insert (112). The insert (112) either fits into a recessed area (132) in the back plate (110) or attaches to the top of the back plate (110). In an alternative embodiment, the assembly has a circuit board (114) with a contact opening (148) and a back plate (114) with a raised area that fits into the contact opening (148). The contact opening (148) exposes a portion of ground plane (136) on the circuit board. The raised area contacts this portion of the ground (136) and thereby makes a large and low impedance connection with the ground (136). Preferably the raised area is created by the insert (112). Using inserts (112) to create the raised areas allows the back plate (110) to have raised areas, yet to be machined without raised areas, thus preventing the warping of the back plate (110) created when the back plate (110) is machined with raised area.

FIG. 5



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Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
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